Worksheet 1 System analysis methods Answers

Task 1

Imagine that you are a systems analyst who has been asked to develop a website for a small group of artists called "Dedham Artists Group", who want to be able to showcase their artworks on the Internet. The waterfall lifecycle model will be used to develop this system.

1. A meeting with the customer, the artist who is in charge of organising this project,
has been arranged.

   (a) What documents or websites will you look at as part of the software development process?

   You might look at the paintings and any digital images of the paintings. Are the digital images good quality? You will probably have to adjust the resolution for the web site – they do not need to be high resolution images.

   You should look at other similar websites to get ideas.

   If online orders are to be accepted via the website, you would need to examine how orders are currently processed. (This would add a whole new level of complexity to the project.)

   (b) Make a list of questions that you will ask the customer.

   VOLUMES: How many artists, and how many works per artist?

   SCOPE OF THE PROJECT: Do you want to accept online orders and credit/debit cards/PayPal payments, or is this to be simply a showcase for the artists' works, with information about how they can purchase an artwork?

   Has the customer any views on how they want the website to look? (You need to be able to show some examples of other sites, and maybe of websites that you have developed for other people.

   Will they want any other information on their website, e.g. events, workshops, exhibitions, special offers?

   Do they need a page to give details about each artist's background/biography/contact details?

   Other reasonable suggestions, e.g. Who will maintain the website? Who will upload new artists and artworks?

   How this will be achieved – will a WYSIWYG control panel be needed, or will they edit the HTML themselves etc. Find out the IT skill level of the artists.

   (c) Is there anyone else you would like to interview to find out more about the requirements?

   Possibly the person in charge may be able to line up one of the artists who has some computing expertise and may have some suggestions about the design of the website

   (d) Suggest some headings that you will have in your report on User Requirements/System Specification

   A summary of the task

Background information about “Dedham Artists’ Group”

The detailed requirements

2. List some of the decisions you will have to make as you start the design phase of this project. What software tools or packages will you consider using?

   Whether to develop the website from scratch using HTML or use a package such as WordPress or Dreamweaver

   List some of the documentation you will produce at the end of the design stage.

   - Which software or programming language will be used
   - A description of the data: data type, format, and validations
   - Database design if appropriate
   - Input screens
   - Output screens and reports
   - How the data will be processed (algorithms, flowcharts, pseudocode)
   - Test plan

Task 2

3. When the website described in Task 1 is completed and shown to the user, it turns out that some of the requirements have not been well understood and it is not exactly what the customer expected.

   At what stage did things probably start to go wrong?

   At the Analysis stage

   How could this situation have been avoided?

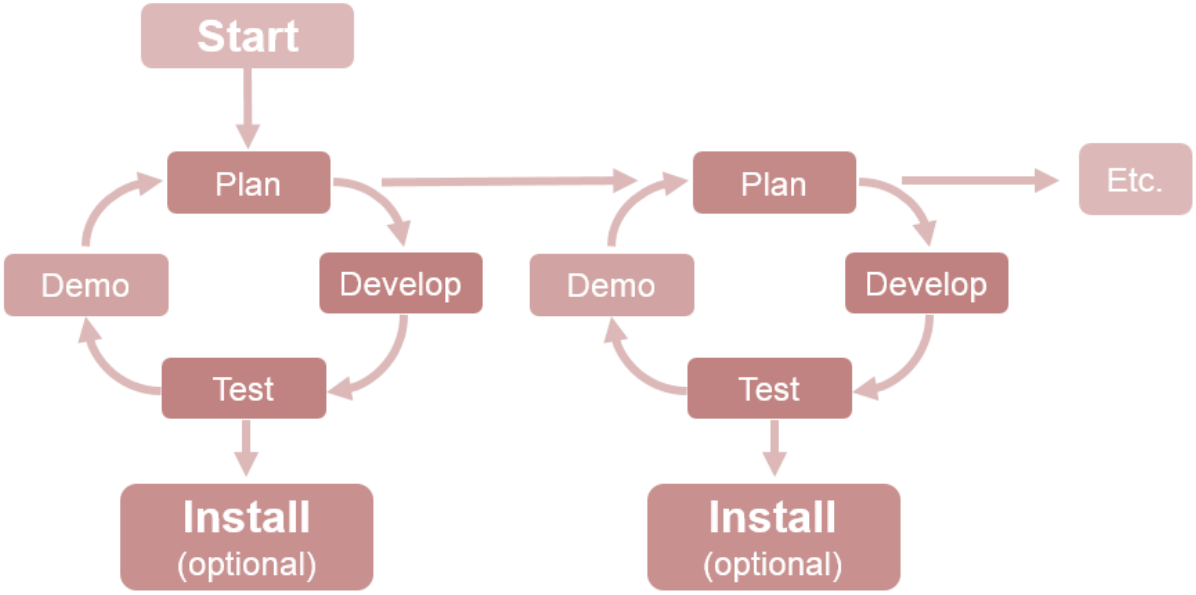
   A different approach may have been better. The Spiral or Agile model – discussed next - may be better suited to this project.

Task 3

4. Draw a diagram representing the Spiral model.

prototype 2
Implement → Evaluate → Analyse → Design → Implement → Evaluate → Analyse → Design → Implement → Evaluate → Analyse → etc.
Design → Implement → Evaluate → Analyse → Design
prototype 1
prototype 3

5. Draw a diagram representing the Agile model



6. Fill in the table by specifying which model each of the following statements describes (Waterfall, Spiral or Agile)

	Statement	Model
1	This model is good for small software projects where at least some of the functions need to be implemented quickly	Agile
2	There is not much user involvement in this model after the Analysis stage	Waterfall
3	This model uses prototyping, with the prototype being refined at each successive stage	Spiral
4	Changes in requirements after the Analysis stage are difficult to include and may mean repeating several stages in the development process	Waterfall
5	Working software is delivered frequently, often in weeks rather than months	Agile
6	This is a linear model in which each stage is separate and is completed and documented before the next stage begins	Waterfall
7	The finished product takes longer to develop than other models because of the time consuming process of getting customer feedback and making amendments	Spiral
8	Each version of the software builds on the previous version, adding functionality each time	Agile
9	This model works well for small projects in which the requirements are clearly understood	Waterfall
10	Fast completion and installation of more and more parts of the project lead to customer satisfaction	Agile